

RADIOACTIVE WASTE PROFILE RECORD

(EC-0230)

(11/21/95)

Generator Name: U.S. DOE Rocky Flats Environmental Technology Site ; Generator #/Waste Stream #: 9002-02 ; Volume of Waste Material: ~9578 cu meters

Contractor Name: Kaiser-Hill ; Waste Stream Name: Pondcrete and associated debris waste ; Delivery Date: TBD

Check appropriate boxes: Licensed Y ☐ N ☒ ; NORM/NARM ☐ ; LLRW ☒ ; MW ☒ ; MW Treated ☐ ; MW Needing Trmt ☒ ; DOE ☒ ; 11c.(2) ☐

Original Submission: Y ☐ N ☒ ; Revision # 2 ; Date of Revision 2/26/99

Name & Title of Person Completing Form: Home Engineering Services, Inc. Phone: (303) 966-2718

A. CUSTOMER INFORMATION:

GENERAL: Please read carefully and complete this form for one waste stream. This information will be used to determine how to properly manage the waste. Should there be any questions while completing this form, contact Envirocare at (801) 532-1330. **WASTES CANNOT BE ACCEPTED AT ENVIROCARE UNLESS THIS FORM IS COMPLETED.** If a category does not apply, please indicate. This form must be updated annually.

1. GENERATOR INFORMATION

EPA ID # CO7890010526 EPA Hazardous Waste Number(s) (if applicable) D006, F001, F002, F005, F006, F007, F009

Mailing Address: RFETS Box 464, Bldg. 130, Golden, CO 80402-0464

Phone: (303) 966-7543

Fax (303) 966-3090

Location of Material (City, ST): Golden, CO

Generator Contact: Colburn Kennedy

Title Program Manager, Waste Remediation and Operations

Mailing Address (if different from above): same

Phone: (303) 966-7543

Fax (303) 966-3090

B. WASTE PHYSICAL PROPERTIES (Should you have any questions while completing this section, contact Envirocare Customer Support Representative at (801) 532-1330.)

1. **PHYSICAL DATA** (Indicate percentage of material that will pass through the following grid sizes, e.g., 12" 100%, 4" 96%, 1" 74%, 1/4" 50%, 1/40" 30%, 1/200" 5%.)

GRADATION OF MATERIAL:

2. **DESCRIPTION:** Color variable Odor slight ammonia or organic

Liquid ☐ Solid ☒ Sludge ☒ Powder/Dust ☒

3. **DENSITY RANGE:** (Indicate dimensions) 2.0 - 140 S.G. lb./ft³ lb./yd³

4. GENERAL CHARACTERISTICS (% OF EACH)

Soil ☐ Building Debris ☐ Rubble ☒ Pipe Scale ☐ Tailings ☐ Process Waste ☒ Concrete ☒ Plastic/Resin ☐

Other constituents and approximate % contribution of each: see Attachment B

5. **MOISTURE CONTENT:** (For soil or soil-like materials.)
(Use Std Proctor Method ASTM D-698)

Optimum Moisture Content: see %

Average Moisture Content: Attachment B %

Moisture Content Range: 20 - 70 %

6. **DESCRIPTION OF WASTE** (Please attach a description of the waste with respect to its physical composition and characteristics. This description can be attached separately or included with the attachment for Item D.1.)

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C. RADIOLOGICAL EVALUATION.

1. **WASTE STREAM INFORMATION.** For each radioactive isotope associated with the waste, please list the following information. Envirocare's license assumes daughter products to be present in equilibrium, these are not required to be listed below and do not require manifesting. (Use additional copies of this form if necessary.)

Isotopes	Concentration Range (pCi/g)	Weighted Average (pCi/g)	Isotopes	Concentration Range (pCi/g)	Weighted Average (pCi/g)
a. see	to		g.	to	
b. Attachment	to		h.	to	
c. C.1	to		i.	to	
d.	to		j.	to	
e.	to		k.	to	
f.	to		l.	to	

2. ☒ **N** Is the radioactivity contained in the waste material Low-Level Radioactive Waste as defined in the Low-Level Radioactive Waste Policy Amendments Act of 1985 or in DOE Order 5820.2A, Chapter III? (Please Circle) If yes, check "LLRW" block on line 3 of page 1.
3. ☒ **Y** ☒ **N** **LICENSED MATERIAL:** Is the waste material listed or included on an active Nuclear Regulatory Commission or Agreement State license? (Please Circle)

(If Yes) TYPE OF LICENSE: Source ____; Special Nuclear Material ____; By-Product ____; NORM ____; NARM ____;

LICENSING AGENCY: _____

D. CHEMICAL AND HAZARDOUS CHARACTERISTICS

1. DESCRIPTION AND HISTORY OF WASTE

Please attach a description of the waste to this profile. Include the following as applicable: The process by which the waste was generated. Available process knowledge of the waste. The basis of hazardous waste determinations. A list of the chemicals and materials used in or commingled with the waste; a list of any and all applicable EPA Hazardous Waste Numbers, current or former; and, a list of any and all applicable land-disposal prohibition or hazardous-waste exclusions, extensions, exemptions, effective dates, variances, or delistings. Attach the most recent or applicable analytical results involving the composition of the waste. Attach any product information or treatment standards. Attach any applicable analytical results involving the composition of the waste. Attach any product information or Material Safety Data Sheets associated with the waste. If a category on this Waste Profile Record does not apply, describe why it does not.

Please describe the history, and include the following:

☒ **N** Was this waste mixed, treated, neutralized, solidified, commingled, dried, or otherwise processed upon generation or at any time thereafter?

☒ **N** Has this waste been transported or otherwise removed from the location or site where it was originally generated?

☒ **N** Was this waste derived from (or is the waste a residue of) the treatment, storage, and/or disposal of hazardous waste defined by 40 CFR 261?

☒ **N** Has this material been treated at any time to meet any applicable treatment standard?

2. LIST ALL KNOWN AND POSSIBLE CHEMICAL COMPONENTS OR HAZARDOUS WASTE CHARACTERISTICS

	(Y)	(N)		(Y)	(N)		(Y)	(N)
a. Listed HW	<input checked="" type="checkbox"/>		b. "Derived-From" HW	<input checked="" type="checkbox"/>		c. Toxic	<input checked="" type="checkbox"/>	
d. Cyanides	<input checked="" type="checkbox"/>		e. Sulfides	<input checked="" type="checkbox"/>		f. Dioxins		<input checked="" type="checkbox"/>
g. Pesticides		<input checked="" type="checkbox"/>	h. Herbicides		<input checked="" type="checkbox"/>	i. PCBs	<input checked="" type="checkbox"/>	
j. Explosives		<input checked="" type="checkbox"/>	k. Pyrophorics		<input checked="" type="checkbox"/>	l. Solvents	<input checked="" type="checkbox"/>	
m. Organics	<input checked="" type="checkbox"/>		n. Phenolics	<input checked="" type="checkbox"/>		o. Infectious		<input checked="" type="checkbox"/>
p. Ignitable	<input checked="" type="checkbox"/>		q. Corrosive	<input checked="" type="checkbox"/>		r. Reactive		<input checked="" type="checkbox"/>
s. Antimony	<input checked="" type="checkbox"/>		t. Beryllium	<input checked="" type="checkbox"/>		u. Copper	<input checked="" type="checkbox"/>	
v. Nickel	<input checked="" type="checkbox"/>		w. Thallium	<input checked="" type="checkbox"/>		x. Vanadium	<input checked="" type="checkbox"/>	
y. Alcohols	<input checked="" type="checkbox"/>		z. Arsenic	<input checked="" type="checkbox"/>		aa. Barium	<input checked="" type="checkbox"/>	
bb. Cadmium	<input checked="" type="checkbox"/>		cc. Chromium	<input checked="" type="checkbox"/>		dd. Lead	<input checked="" type="checkbox"/>	
ee. Mercury	<input checked="" type="checkbox"/>		ff. Selenium	<input checked="" type="checkbox"/>		gg. Silver	<input checked="" type="checkbox"/>	
hh. Benzene	<input checked="" type="checkbox"/>		ii. Nitrate	<input checked="" type="checkbox"/>		jj. Nitrite		<input checked="" type="checkbox"/>
kk. Fluoride	<input checked="" type="checkbox"/>		ll. Oil		<input checked="" type="checkbox"/>	mm. Fuel		<input checked="" type="checkbox"/>
nn. Chelating Agents	<input checked="" type="checkbox"/>							
oo. Other Known or Possible Materials or Chemicals								

see Attachment D.2

3. **ANALYTICAL RESULTS FOR TOXICITY CHARACTERISTIC.** (Please transcribe results on the blank spaces provided. Attach additional sheets if needed, indicate range or worst-case results).

Metals (circle one):		Total (mg/kg)	or	TCLP (mg/l)	Organics (circle one)		Total (mg/kg)	or	TCLP (mg/l)
Arsenic	<u>see</u>	Lead		<u>see</u>					
Barium	<u>Attachment</u>	Mercury		<u>Attachment</u>					
Cadmium	<u>D.3</u>	Selenium		<u>D.3</u>					
Chromium		Silver							
Copper		Zinc							

4. **ANALYTICAL RESULTS FOR REQUIRED PARAMETERS:** (Please transcribe results on the blank spaces provided. Attach additional sheets if needed).

Soil pH	<u>9 - 14</u>	Paint Filter Liquids Test	<u>Pass</u> (Pass/Fail)	Cyanide Released	<u><10 (total)</u> mg/kg	Sulfide Released	<u>non-detect</u> mg/kg
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5. **IGNITABILITY (40 CFR 261.21[a][2],[4].)**

Flash Point	<u>≥ 160</u>	°F °C	Is the waste a RCRA oxidizer?	<u>Y</u>	<u>Nx</u>
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6. **CHEMICAL COMPOSITION** (List all known chemical components and circle the applicable concentration dimensions. Use attachments to complete, if necessary.)

Chemical Component	Concentration	Chemical Component	Concentration
<u>see</u>	<u> </u> % mg/kg	<u> </u>	<u> </u> % mg/kg
<u>Attachment</u>	<u> </u> % mg/kg	<u> </u>	<u> </u> % mg/kg
<u>D.6</u>	<u> </u> % mg/kg	Halogenic Organic (HOC) Compounds (Sum of the list of HOCs.)	<u> </u> mg/kg
<u> </u>	<u> </u> % mg/kg		

7. **TREATMENT STANDARDS. (FOR MIXED WASTE ONLY).** Describe the waste's applicable treatment standards. Include the EPA Hazardous Waste Numbers and information with respect to the waste's subcategory (e.g., low mercury subcategory), treatability group (e.g. non-wastewaters), treatment standards and concentrations or technology (e.g. 5.7 mg/l selenium extract or INCIN (incineration)), and any applicable exemptions, exclusions, variances, extension, allowances, etc. The following format is suggested. If additional space is needed, provide an attachment to this profile record.

EPA HW Number	Subcategory	Treatability Group	Treatability Standard(s) and Concentrations or Technology	Any Exemptions, Variances, Extensions or Exclusions (List 40 CFR reference)
<u> </u>	<u>see</u>	<u> </u>	<u> </u>	[Y N] <u> </u>
<u> </u>	<u>Attachment D.7</u>	<u> </u>	<u> </u>	[Y N] <u> </u>

- E. **REQUIRED CHEMICAL LABORATORY ANALYSIS.** Generator must submit results of analyses of the waste. Results are required from a qualified laboratory for the following analytical parameters unless nonapplicability of the analysis for the waste can be stated and justified in attached statements. Attach all analytical results and QA/QC documentation. (CAUTION: PRIOR TO ARRANGING FOR LABORATORY ANALYSES, CHECK WITH ENVIROCARE AND LABORATORY REGARDING UTAH LABORATORY CERTIFICATIONS.

FOR ALL WASTE TYPES: CHEMICAL ANALYSIS: Soil pH (9045), Paint Filter Liquids Test (9095); Reactivity (cyanide and sulfide).

1. **MINIMUM ADDITIONAL ANALYTICAL REQUIRED FOR:**

- Non-RCRA Waste (Non Mixed Waste, i.e. LLRW, NORM): TCLP including the 32 organics, 8 metals, and copper (Cu) and zinc (Cn).
- Mixed Waste: Results to show why the waste is hazardous, and the following analytical results:
 - TOX (Total Organic Halides SW-846 9020/9022) or volatile & semi-volatile organics (8240+8270, required if TOX >200 mg/kg)
 - Applicable concentration-based treatment standards
 - Total and Amenable Cyanide, SW-846 9010 or 9012, required if reactive cyanide >20 mg/kg

2. **REQUIRED RADIOLOGICAL ANALYSES:** Please obtain sufficient samples to adequately determine a range and weighted average of activity in the waste. Have a sufficient number of samples analyzed by gamma spectral analysis for all natural and man-made isotopes such that they support the range and weighted average information for the waste stream that will be recorded in item D.1. If Uranium, Plutonium, Thorium, or other non-gamma emitting nuclides are present in the material, have at least (1) sample evaluated by radiochemistry to determine the concentration of these additional contaminants in the material.

3. **PRE-SHIPMENT SAMPLES OF WASTE TO ENVIROCARE**

Once permission has been obtained from Envirocare, please send 5 representative samples of the waste to Envirocare. A completed EC-2000 form must be included with the sample containers. These samples will be used to establish the waste's incoming shipment acceptance parameter tolerances and may be analyzed for additional parameters. Send about two pounds (one liter) for each sample in an air-tight clean glass container via United Parcel Post (UPS) or Federal Express to:

Envirocare of Utah, Inc., Attn: Sample Control, Tooele County, Interstate-80, Exit 49, Clive, Utah 84029
For Federal Express Use Zip Code 84083). Phone: (801) 521-9619

4. **LABORATORY CERTIFICATION INFORMATION.** Please indicate below which of the following categories applies to your laboratory data.

- a. Note analytical data that is to represent mixed waste must be Utah certified or from the USEPA. All radiological data used to support the data in item C.1. must be from a Utah-certified laboratory.

☒ **UTAH CERTIFIED.** The laboratory holds a current certification for the applicable chemical or radiologic parameters from the Utah Department of Health insofar as such official certifications are given.

☐ **GENERATOR'S STATE CERTIFICATION.** The laboratory holds a current certification for the applicable chemical parameters from the generator's State insofar as such official certifications are given, or

☐ **GENERATOR'S STATE LABORATORY REQUIREMENTS.** The laboratory meets the requirements of the generator's State or cognizant agency for chemical laboratories, or:

If using a non-Utah certified laboratory, briefly describe the generator state's requirements for chemical analytical laboratories to defend the determination that the laboratory used meets those requirements, especially in terms of whether the requirements are parameter specific, method specific, or involve CLP or other QA data packages. Note: When process or project knowledge of this waste is applied, additional analytical results may not be necessary to complete Section B, D.2, D.5, or D.6 of this form.

- b. For analytical work done by Utah-certified laboratories, please provide a copy of the laboratory's current certification letter for each parameter analyzed and each method used for analyses required by this form.
- c. For analytical work done by laboratories which are not Utah-Certified, please provide the following information:

State or Other Agency Contact Person

Generator's State

Telephone Number

Lab Contact Person

Laboratory's State

Telephone Number

F. **CERTIFICATION**

GENERATOR'S CERTIFICATION OF REPRESENTATIVE SAMPLES, ANALYTICAL RESULTS FROM QUALIFIED LABORATORIES, USE OF APPROVED ANALYTICAL AND SAMPLING METHODS, AND ARRANGEMENTS FOR TREATMENT OR NON-PROHIBITED DISPOSAL. I certify that samples representative of the waste described in this profile were or shall be obtained using state- and EPA-approved sampling methods. I also certify that where necessary those representative samples were or shall be provided to Envirocare and to qualified laboratories for the analytical results reported herein. I further certify that the waste described in this record is not prohibited from land disposal in 40 CFR 268 (unless prior arrangements are made for treatment at Envirocare) and that all applicable treatment standards are clearly indicated on this form. I also certify that the information provided on this form is complete, true and correct and is accurately supported and documented by any laboratory testing as required by Envirocare of Utah, Inc. I certify that the results of any said testing have been submitted to Envirocare of Utah, Inc.

Generator's Signature CE Kennedy
(Sign for the above certification).

Title Program Mgr

Date 3/26/99